

may receive the push notification via the message handling service and request additional messages from one or more microservice, which may be delivered using method **1700**.

Referring now to FIG. **18**, there is illustrated an example process flow for a method of configuring a wearable computing device from a host computing device. The process flow may be carried out by a wearable computing device with a personal area network interface as described herein, and a host computing device with a host personal area network interface as described herein.

Method **1800** begins at **1802** with the host computing device providing a remote configuration application and a remote configuration service, which operate as described further below. In some cases, the functionality of the remote configuration application and remote configuration service may be combined.

The wearable computing device can provide a configuration service at **1804**, which operates as described further below.

At **1806**, the remote configuration application of the host computing device, through the remote configuration service, requests current configuration settings from the configuration service of the wearable computing device. The request is received at **1808** and the respective settings are received, then transmitted back to the remote configuration service at **1812**.

At **1816**, the retrieved configuration settings are provided to the remote configuration application, by the remote configuration service, for display in a user interface of the host computing device.

At **1820**, user input is received from a host input device to determine one or more updated configuration settings and, based on the received user input data, the remote configuration application determines the one or more configuration settings of the wearable computing device to be updated. The updated configuration settings are provided to the remote configuration service, which transmits the updated settings at **1824**.

The updated settings are received by the wearable computing device at **1828**, and may be updated in a memory of the wearable computing device at **1832**.

In some cases, the wearable computing device may provide a master service as described herein that consolidates data from the configuration service and at least one system service, in which case the one or more configuration settings are transmitted to the configuration service—and received from the host computing device—via the master service. In some cases, the wearable computing device may also provide a message handler as described herein that consolidates data from the configuration service and at least one application program of the wearable computing device, in which case the one or more configuration settings are transmitted to the configuration service—and received from the host computing device—via the message handler.

The above description of illustrated embodiments, including what is described in the Abstract, is not intended to be exhaustive or to limit the embodiments to the precise forms disclosed. Although specific embodiments of and examples are described herein for illustrative purposes, various equivalent modifications can be made without departing from the spirit and scope of the disclosure, as will be recognized by those skilled in the relevant art. The teachings provided herein of the various embodiments can be applied to other portable and/or wearable electronic devices, not necessarily the exemplary wearable electronic devices generally described above.

The various embodiments described above can be combined to provide further embodiments. To the extent that they are not inconsistent with the specific teachings and definitions herein, all of the U.S. patents, U.S. patent application publications, U.S. patent applications, foreign patents, foreign patent applications and non-patent publications referred to in this specification and/or listed in the Application Data Sheet which are owned by North Inc., including but not limited to U.S. Provisional Patent Application No. 62/670,200, U.S. Provisional Patent Application No. 62/609,681, U.S. Provisional Patent Application No. 62/609,607, U.S. Patent Publication 2016/0238845, U.S. Patent Publication 2016/0377866 and U.S. Patent Publication No. 2016/0377865, are incorporated herein by reference, in their entirety. Aspects of the embodiments can be modified, if necessary, to employ systems, circuits and concepts of the various patents, applications and publications to provide yet further embodiments.

The invention claimed is:

**1.** A method of wirelessly communicatively coupling a wearable computing device to a host computing device, the method comprising:

the host computing device receiving an advertisement packet from the wearable computing device via a low-power personal area network;

in response to the advertisement packet, transmitting a connection request to the wearable computing device via the low-power personal area network;

pairing with the wearable computing device via the low-power personal area network;

transmitting a data message to the wearable computing device when pairing via the low-power personal area network, the data message comprising an instruction to pair via a general personal area network;

notifying the wearable computing device of one or more characteristics;

receiving a characteristic write request;

in response to the characteristic write request, pre-authorizing the wearable computing device for the pairing via the general personal area network; and

pairing with the wearable computing device via the general personal area network.

**2.** The method of claim **1**, further comprising, prior to receiving the advertisement packet, the host computing device entering into a listening mode.

**3.** The method of claim **1**, wherein pairing via the low-power personal area network further comprises receiving a connection request confirmation from the wearable computing device, and validating the connection request confirmation.

**4.** The method of claim **3**, further comprising, prior to pairing via the general personal area network, receiving a service discovery request from the wearable computing device, and transmitting a services list to the wearable computing device in response to the service discovery request.

**5.** The method of claim **1**, further comprising providing the data message in the form of a notification message.

**6.** The method of claim **1**, further comprising using a low bandwidth personal area network for the low-power personal area network.

**7.** The method of claim **6**, further comprising using a Bluetooth Low Energy network for the low bandwidth personal area network.

**8.** The method of claim **1**, further comprising using the general personal area network to provide greater bandwidth than the low-power personal area network.